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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/506,424	09/02/2004	Yoshikazu Makioka	082460	1252
38834 7590 02/26/2010 WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP 1250 CONNECTICUT AVENUE, NW SUITE 700 WASHINGTON, DC 20036				
EXAMINER HAYLIN, ROBERT H				
ART UNIT		PAPER NUMBER		
1626				
NOTIFICATION DATE		DELIVERY MODE		
02/26/2010		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentmail@whda.com

Office Action Summary

Application No.

10/506,424

Applicant(s)

MAKIOKA ET AL.

Examiner

ROBERT HAVLIN

Art Unit

1626

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-20 and 27-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-20 and 27-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

RCE: A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/22/2010 has been entered.

Status of the claims: Claims 15-20, and 27-31 are currently pending.

Priority: This application is a 371 of PCT/JP03/02422 (03/03/2003) and claims foreign priority to JAPAN 2002057419 (03/04/2002).

RESPONSE TO APPLICANT ARGUMENTS/AMENDMENTS

Applicant has restored claims 15-20 and 27-28 to the 12/17/2008 form and added new claims 29-31.

Claim Rejections - 35 USC § 112

1. Claims 15-20, and 27-28 were rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Applicant has deleted the unsupported limitation:

wherein said process for extracting a rare earth metal ion does not include the use of a complex organoboron compound or a substituted or unsubstituted polyethylene glycol.

Therefore, this rejection is **withdrawn**.

NEW CLAIM REJECTIONS NECESSITATED BY AMENDMENT

Claim Rejections - 35 USC § 103

Applicant has restored the claims to the prior form that was rejected as detailed in the 2/26/2009 office action. Therefore, the following rejection is reinstated.

2. Claims 15-20 and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laskorin et al. (CAPLUS Abstract of Radiokhimiya (1984), 26(2), 161-6) in view of Romanovskiy et al. (US 6,258,333). The rejection is also expanded to the newly added dependent claims 29-31 as detailed below.

Applicant argues in the remarks at page 8 that one of ordinary skill in the art would not combine the two references because of the role the organophosphorus compound plays is different. This argument is not persuasive because: (1) both references are within the same field of endeavor, (3) one of ordinary skill in the art would reasonably combine them based on the disclosure of Laskorin (suggesting extraction with the compound) and Romanovskiy (abstract states the invention is, in part, for methods of extracting rare earths from liquids using organophosphorus compounds), and (3) there is nothing causing the combination of the two references to be incompatible when arriving at the claimed invention.

Applicant next argues that the ion-capturing function of the organophosphorus compound is different in the two references and thus it would not have been obvious to combine the teachings of the two references. This argument is not persuasive because the two compounds share a substantial structural similarity that alone might suggest their combination, in addition, both references specifically identify the utility of the compounds as being for the extraction of rare earth metals from solution. Therefore,

the totality of the prior art suggests their combination, regardless of the details of the mechanism of the action of the compound.

For the above reasons, this rejection is **maintained**.

Regarding claims 29-31, adding limitations of concentration of the metal ion in solution and ratio of phosphonamide compound to metal ions, these limitations are also obvious for the following reasons. The prior art discloses such ranges and ratios, for example, cols. 7-10 of Romanovskiy describe extraction examples where the metal ions have the concentration within the ranges claimed, in addition, the ratio of the two are also within the claimed range. One of ordinary skill in the art, based on their own knowledge and the description in Romanovskiy would know apply the combined teachings within the claimed ranges because Romanovskiy specifically describes them, and this is the physically useful range for these types of extraction procedures. Therefore, the claims are **rejected**.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 15-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Fadeeva et al. (CAPLUS Abstract of: Zhurnal Neorganicheskoi Khimii (1972), 17(3), 771-5).

The prior art teaches Scandium extraction with the following compound (TEAHP) out of an aqueous solution into an organic phase.



Conclusion

The claims are not in condition for allowance.

The examiner would also like to make the following references part of the record:

Vodolazov and Shatalov, Atomic Energy, Vol. 90, No. 3, 2001;

Nash, The Minerals, Metals, and Materials Society (TMS) Annual Meeting, Nashville, TN (US), 03/12/2000--03/16/2000 ; PBD: 12 Jan 2000.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT HAVLIN whose telephone number is (571)272-9066. The examiner can normally be reached on Mon. - Fri., 7:30am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful the examiner's supervisor, Joe McKane can be reached at (571) 272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert Havlin/
Examiner, Art Unit 1626